Multicore Architecture and Parallel Programming
Assignment on MPI Programming

Due:23:59 on 29th Oct.

1. (round-trip time test)A MPI task 0 is sending beacon packets to another MPI task 1. After receiving each beacon, task 1 will reply with an ACK. Task 0 could calculate the round trip time of the connection. Please simulate this process using MPI.
2. (pass-string problem) Consider some children playing a voice passing game. The child #0 say a sentence to child #1, who will write down the first word and pass remaining words to child #2. Child #2 do the same thing as child #1, write down the first word (which is the second word of the original sentence) and pass the remaining words to next child… The first child with no word received write down his ID.
   Please simulate this process using MPI. (The WRITE DOWN action is substituted by PRINT TO STDOUT)

NOTICE:

1. Server IP: 202.120.38.28, port: 22. Username: We have five accounts for you to choose from {publichw3_0 , publichw3_1 , publichw3_2 , publichw3_3 , publichw3_4}. Password: cs427. You can ssh login to work on the server. You can use scp to perform file transfer between your PC and server.
2. You have to write a makefile to compile your code. Sample makefile is shown below:

```
EXECS=mpi_hello_world
MPICC?=mpicc

all: ${EXECS}

mpi_hello_world: mpi_hello_world.c
	${MPICC} -o mpi_hello_world mpi_hello_world.c

clean:
	rm -f ${EXECS}
```

3. You should archive your source code and makefile with StudentID_Name_HW3.tar.gz(or any archive file types). Do not include binary file.
4. If you have any questions, please feel free to contact TAs(吴飞洋、官惠泽、王雅洁) in our WeChat group.